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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/535,360

10/06/2005

Henry Petersen

A5-1952

3912

27127 7590 03/22/2007  
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EXAMINER

HOOK, JAMES F

ART UNIT

PAPER NUMBER

3754

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/535,360	<b>Applicant(s)</b> PETERSEN ET AL.	
	<b>Examiner</b> James F. Hook	<b>Art Unit</b> 3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

It is noted that the current application does not appear to have a drawings section set forth in the digitally scanned file wrapper. Applicant may wish to contact the EBC to have this corrected. The examiner has been utilizing the drawings set forth in the priority document. If the drawings from the PCT are to be used it is noted that Figure 1 may be missing the number "1" after the word "Figure", and such may also need to be corrected if applicant files a response to this office action.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-8 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Muller. The patent to Muller discloses the recited flexible tubular device, where the recitation of up to 60 mm in diameter is in the preamble and breathes no life into the body of the claim, where the hose in Muller inherently can be 60 mm or less in diameter,

comprising a metal wall 3 which is seen in figure 1 to have the same shape as applicants corrugations where the inner part of the corrugation is of a different radial diameter curve than the outer part of the corrugation, the crests and valleys of the corrugation transition from one to the other thereby creating a non constant curvature where one corrugation is longer than the other by at least the amounts set forth as seen in the figure and further covered by the specification, the wall 1 itself has an inner and outer surface, and the curves of the corrugations have local minimum curvature as well as global maximum and minimums.

Claims 1-11 are rejected under 35 U.S.C. 102(b) as being clearly by Jung. The patent to Jung discloses the recited flexible tubular device, where the recitation of up to 60 mm in diameter is in the preamble and breathes no life into the body of the claim, where the hose in Jung inherently can be 60 mm or less in diameter, comprising a metal wall 1 which is seen in figures 2 and 4 to have the same shape as applicants corrugations where the inner part of the corrugation is of a different radial diameter curve than the outer part of the corrugation, the crests and valleys of the corrugation transition from one to the other thereby creating a non constant curvature where one corrugation is longer than the other by at least the amounts set forth as seen in the figures and further covered by the specification, the specific ratios are also set forth as is the use of an aluminum alloy or other alloy material such as steel to form the metal conduit, the wall 1 itself has an inner and outer surface, the curves of the corrugations have local minimum curvature as well as global maximum and minimums, the manner in which the convolutions are made is a method step in an article claim and does not

further limit the actual metal pipe itself, where any method could be used to form the corrugations.

Claims 1-3 and 5-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Katayama. The patent to Katayama discloses the recited flexible tubular metal device which inherently has an internal diameter up to 60 millimeters based upon the tube being used to convey fuel or refrigerant and such being known to be at least smaller in diameter than 60 millimeters, there are one or more corrugated convolutions where the innermost wall is made of metal including stainless steel which is a metal alloy, and is formed with corrugations that change positions from first to second sections where the first sections can be seen to be at least 10% longer than the length of the second sections, the outside surface is seen to have a non-constant curvature, the curve is continuous in the first and second sections and defined by an intersection of the outside surface and a plane through a longitudinal axis of the device, the sign of the curvature changes only once, from the figures it is seen that the length of sections is at least 50% between the first and second sections, there is at least 20% less curvature angle in the top convolutions from the bottom portions, the curve has global maximums and minimums at the top and bottom portions, the curve is seen to have a local minimum curvature between each adjacent pair of top and bottom portions, the curve is symmetric about a perpendicular axis, a majority of the convolutions are substantially identical, the article is made of a metal alloy, it is immaterial in an article claim as to what method is used to form the hose therefore such does not hold any patentable weight at this time.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama. The patent to Katayama discloses in either the drawings or specification the recited structure set forth above with the exception of disclosing a pitch to height ratio range, however such is considered to be merely a choice of mechanical expedients where it would have been obvious to one skilled in the art to use routine experimentation to arrive at optimum values for the pitch-height ratio that would meet the needs of the user as such only requires routine skill in the art.

***Response to Arguments***

Applicant's arguments filed December 12, 2006 have been fully considered but they are not persuasive. With respect to the request to provide description of the references cited under 35 USC 102, the examiner has provided further explanation as requested, however, such is not required when the reference clearly anticipates subject matter. Likewise applicant also received an action in the PCT with regards to these references so applicant should have been aware of the references and their limitations. The office action can still be made final. With regards to Kauder and Lupke such have

been dropped, and the rejection under Muller has been corrected to eliminate certain claims. The rejection under Jung remains the same, as does the rejections under Katayama. With respect to Muller, the argument that helical convolutions are not perpendicular to the longitudinal axis is not persuasive, where any corrugation is perpendicular to the longitudinal axis, and the suggestion that this limitation is in some way referring to corrugations not helical is not persuasive when such is not claimed in this manner and this argument is more detailed than the claim language. The same is true of the argument directed at Jung for the same reason as Muller, this argument is not persuasive that the claim language in some way excludes helical corrugations. With respect to the argument that the wall 1 of the tube is formed of a metal material that is corrugated and has inner and outer surfaces of the tubular device which is defined as the wall 1, therefore, this meets the current claim language where the arguments appear to be more detailed than the claim language. As set forth in the rejection above, Jung teaches a change from one radius of curvature to another and therefore is a non constant curvature in that inherently the convolutions have to change radius of curvature to go from one to the other and that such is constantly changing, the same as applicants corrugations. With respect to Katayama, the same is true of the metal layer of Katayama having an inner and outer surface which meet the claim language, where the argument that such excludes further layers being provided on the outside or inside surface is not persuasive and more detailed than the claim language. For the same reason as described in Jung above, there is a non constant curvature in the corrugations as well. With respect to the 103 rejection under Kamayama there is no

specific argument directed at why such is not an obvious choice of mechanical expedients therefore this rejection stands.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

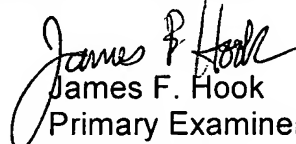
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3754

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
James F. Hook  
Primary Examiner  
Art Unit 3754

JFH